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an Unusual Deformity

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A Case of Pott's Disease with an Unusual Deformity.

DESCRIPTION OF IMPROVED SPINAL APPARATUS.¹

By HENRY LING TAYLOR, M.D.,

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THE patient whose history I will relate was an unmarried lady, twenty-nine years of age. Father and mother are living, but there is phthisis on the paternal side. Patient was always delicate and easily tired. She had whooping-cough when a baby, after which a cervical gland suppurated; she had measles at nine years. In the summer of 1882 the patient began to have severe pains low down in or near the sacrum, which would be aggravated by walking. In the autumn the mother noticed that the right hip was higher than the left. Then the patient began to hold the shoulders stiff and would stiffen the back when stooping; and had to lie on the left side without moving when in bed. In October, 1882, the patient was obliged to go to bed on account of the severity of the pain, where she remained until February, 1883. While in bed the pains disappeared and the lateral inclination of the back to the right became less.

After that she grew rapidly worse; the pains, which extended at times to the right side, across the hips, and down the thighs, became so severe as to twice compel her to go to bed for several months. While resting in

¹ Case related and apparatus shown at the meeting of the American Orthopædic Association, New York, June 15 and 16, 1887.



bed she would feel better, and on again attempting to go around she would get worse. Her general health suffered very much, and she was sent to Florida in October, 1885, supposed to be suffering from phthisis. She was somewhat drawn over to the right side.

In August, 1886, a swelling appeared in the left lumbar region, which was opened in January, 1887, by her physician, Dr. J. D. Fernandez, Jacksonville, Fla., who had already diagnosed Pott's disease, and a large quantity, estimated at a quart, of light-colored, thin pus evacuated. The patient had had fever before this and it continued some time; indeed, the patient thinks she was not quite free from it until within a very short time of consulting me, April 26, 1887. In December and January she had cough and dyspnoea, but no expectoration.

When seen by me she looked extremely cachectic, and suffered severe pain in the sides and low down in the back. She had been dressed and sat up a little daily since February 1st, but she walked a few steps only, with the greatest difficulty, leaning on someone's arm, and bent over extremely to the right.

Examination showed a small prominence at the eleventh dorsal vertebra, first noticed last January, and another at the third and fourth lumbar, noticed four years ago. These are shown at the left of Fig. 1. There was a sinus discharging pus in the left loin. But what was most striking was the extreme lateral bending of the spine at the two foci of disease, amounting together to over fifteen degrees deviation from the vertical (shown at the right of Fig. 2). The distance from the iliac crest to the axilla was two inches greater on the left than on the right side. This lateral deformity had been a marked feature of the case from the beginning, and was noticed before the posterior projection.

Lateral deviations of moderate, and sometimes considerable, extent, due to unequal erosion of the two sides of the vertebral bodies, are not uncommon, especially in the

earlier stages of the disease, low down. Indeed, as was pointed out in the discussion following the relation of this case at the meeting of the American Orthopædic Association, in early lumbar caries lateral tilting of the spine without rotation may be a valuable diagnostic sign.

These lateral deviations ordinarily yield to the antero-

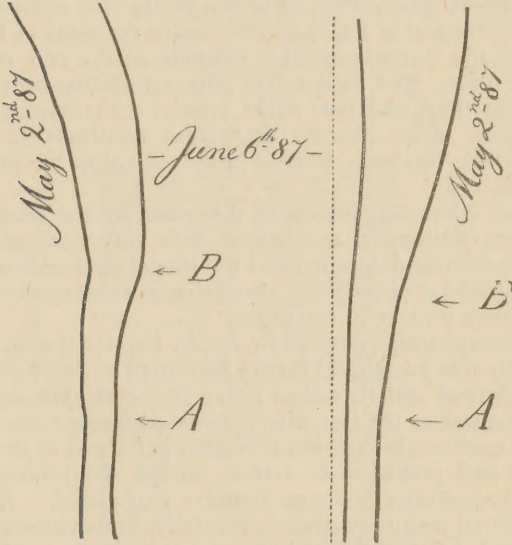


FIG. 1.

FIG. 2.

posterior protective support which is demanded by the other indications of the disease, and is not a troublesome complication. This case presented, however, such unusual features that I was at first quite in doubt what plan of support would be most efficient. I finally decided to employ Dr. Taylor's improved antero-posterior leverage spinal apparatus, which I will presently describe; but to fit it to the back I was obliged to curve the verti-

cal bars over to the right to correspond to the lateral contour of the spine. There was no lateral action in the apparatus except the slight pulling of the left perineal strap, which I buckled tighter than the right. The patient was put to bed. The pain disappeared in a few days, and the patient began to improve in health. Considerably to my surprise, the lateral distortion at the end of a month was trifling, as shown by the line nearest the dotted vertical in Fig. 2. The line to the right of Fig. 1 shows the antero-posterior contour at the end of the same time. The patient has gone on gaining up to the present time, and now walks around with considerable freedom. The abscess discharges considerably less, and there has been marked improvement in the general health.

The interesting points in this case are the excessive degree of tilting at two points, with very moderate antero-posterior deformity, and the predominance throughout of lateral distortion; also its rapid subsidence under adequate protective treatment.

The apparatus devised by Dr. C. Fayette Taylor, over twenty-five years ago,¹ for the treatment of Pott's disease, and figured and described (often incorrectly) in surgical works, has in the last fifteen years undergone considerable modification and improvement in the way of definiteness and precision of action, though the principle of antero-posterior leverage remains unchanged. As the perfected instrument has never been authoritatively described, I thought it might be of interest to the profession to exhibit a cut of it, and indicate the points in which it differs from the apparatus generally known by Dr. Taylor's name.

The apparatus shown (Figs. 3 and 4) is the form which has been in use in Dr. Taylor's private practice for twelve years or more.² It differs from the apparatus

¹ Shown at the meeting of the New York State Medical Society, Albany, February 3, 4, and 5, 1863.

² Apparatus like the one figured, and adapted to the different regions of the spine, were exhibited at the Centennial Exhibition, Philadelphia, 1876.

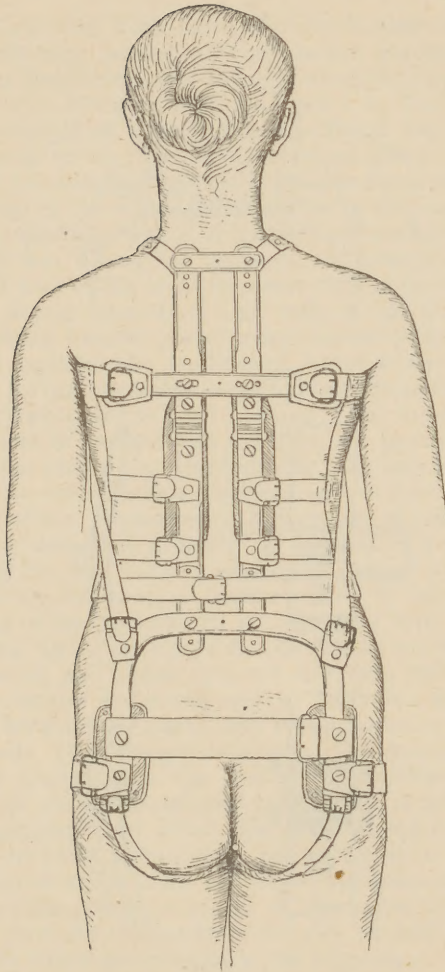


FIG. 3.

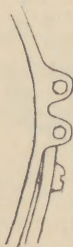
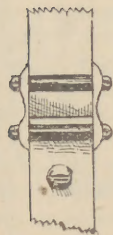
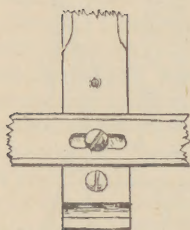
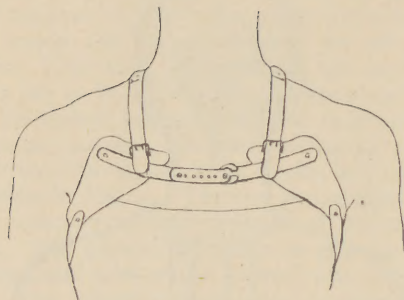


FIG. 4.

shown to the New York State Medical Society in 1863 in the following points: 1. The parallel vertical bars have been lengthened, and end in hooked pieces passing well over the shoulders near the neck. 2. The hinges differ somewhat in construction (see detail Fig. 4) and are screwed to the bars, being retained solely for the purpose of facilitating modification of the apparatus corresponding to the varying indications of the case. 3. The horizontal hip-band is discarded, and replaced by a rigid steel bar having the shape of an inverted U; to the upper part of this band the lower ends of the vertical bars are firmly attached. The ends of the U-shaped band are fitted into the post-trochanteric sulcus on either side, and together with the hooked pieces at the root of the neck fix the apparatus laterally, besides assisting in antero-posterior and vertical fixation. The lower ends, being points of contact with the skin, are protected by hard rubber plates. 4. Hard rubber pads are used instead of the soft pads formerly employed, to transmit the leverage of the apparatus to the region of the spine which it is desired to protect. 5. Instead of the straps encircling the arm formerly used to get a fixed point for counter-force in front, a "chest-piece" is employed, consisting of two ear-shaped or triangular hard rubber pads, fitted under the clavicles and resting on the pectoral muscles, and joined by a stiff steel bar, curved forward to escape the chest, and so contrived that the distance between the plates may be increased or diminished at will. The chest-piece being in position, is buckled to straps coming from the ends of the shoulder-hooks above, and below it is strapped to a buckle at the angle of the U-hip-band on either side, thus leaving the arm free and the axilla untouched. See upper part of Fig. 4. 6. The apron which holds the whole apparatus forward reaches to the posterior border of the axilla on either side, and from the trochanter to the arm laterally, and is secured by straps and buckles to the apparatus.

It is to be understood, of course, that appropriate

modifications of structure of the apparatus are made for disease in the different regions of the spine, and for the character and amount of the deformity. Most cases of disease above the sixth or seventh dorsal will require Dr. Taylor's circular pivoted head-support, which is easily fitted to this apparatus. The different points alluded to are shown in the cuts.

